

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
)	
Dennis J. Jones, Jr.)	Art Unit: 1751
)	
Application No.: 10/627,945)	Examiner: Ogden Jr., N.
)	
Filing Date: July 24, 2003)	Confirmation: 3664
)	
For: "METHODS OF TREATING AND)	
CLEANING FIBERS, CARPET YARNS AND)	
CARPETS")	

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
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August 20, 2007

Sir:

Applicant respectfully requests review of the final rejection in the above-identified application. No amendments are being filed with this request. This request is being filed with a Notice of Appeal. The review is requested for the reasons stated below.

As there are no rejections under 35 USC §102 or 35 USC §112, the sole issue for appeal is the nonobviousness of the pending claims. Applicant asserts that the claims are nonobvious.

I. Composition claims 45 and 47-53, Treatment claims 71-72, and Fiber claims 81-82.

Each of these claims recites a sub-range of gallic acid content within the recited tannic acid element. The Patent Law recognizes two exceptions to the rule that it is obvious to discover an optimum sub-range by routine experimentation: (1) the sub-range optimized was not recognized to be a result-effective variable, and (2) the results of optimization were unexpectedly good for the sub-range. Nonobviousness of unrecognized result-effective variables is acknowledged separately from nonobviousness of unexpectedly good results. While it is legally unnecessary to demonstrate unexpectedly good results for claimed sub-ranges wherein the result-effectiveness was unrecognized, Applicant has demonstrated both for these claims.

A. No legally sufficient prima facie rejection can be based upon the optimization of an unrecognized result-effective variable.

Claims 45, 47-53, 71-72, and 81-82 each recite a tannic acid element having a sub-range of gallic acid content. The Action contends that “[i]t would have been obvious to one of ordinary skill in the art, absent a showing to the contrary, to optimize the gallic acid content limitation of tannic acid because the prior art of record teaches and invites the inclusion of any commercial tannic acid.” May, 17, 2007 Office Action at ¶1, ¶2, ¶3, and ¶11 (citing *In re Peterson*, 315 F.3d 1325, 1330, 65 USPQ2d 1379, 1382 (Fed. Cir. 2003) (A copy was enclosed with Applicant’s Prior Response)). The Action concedes that the cited references fail to disclose or suggest a gallic acid content. *Id.* at ¶1, ¶2, and ¶3. Thus, the issue is whether a recited sub-range of gallic acid content within the tannic acid element is *prima facie* obvious.

It is well-established that a “particular parameter must first be recognized as a result-effective variable, *i.e.*, a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation.” MPEP § 2144.05(II)(B) (citing *In re Antonie*, 559 F.2d 618 (CCPA 1977) (emphasis added)). Thus, the nonobvious optimization of unrecognized result-effective variables is an exception to the general rule:

In *In re Aller* . . . the court set out the rule that the discovery of an optimum value of a variable in a known process is normally obvious. We have found exceptions to this rule in cases where the results of optimizing a variable, which was known to be result effective, were unexpectedly good. . . . This case, in which the parameter optimized was not recognized to be a result-effective variable, is another exception.

In re Antonie, 559 F.2d 618, 620 (CCPA 1977) (emphasis added).

Thus, if a parameter is unrecognized to be result-effective, one of skill would not know to use his routine skill to produce the claimed invention. Said another way, if a parameter is unrecognized to be result-effective, optimization of such a parameter would not even be obvious to try.

The opinions cited in the Action and by Applicant follow this rule. In *Peterson*, the claimed invention concerned “[a] nickel-base superalloy . . . consisting essentially of about 1 to 3 percent rhenium [and] about 14 percent chromium.” 315 F.3d at 1327. The Examiner had rejected the claim as obvious in view of the Shah reference, which disclosed “very broad ranges

for rhenium (0-7%) and chromium (3-18%).” *Id.* at 1328. The Court upheld the rejection and held that “selecting a narrow range from within a somewhat broader range disclosed in a prior art reference is no less obvious than identifying a range that simply overlaps a disclosed range.” *Id.* at 1330 (emphasis added). Therefore, when a prior art reference recognizes that parameters (*e.g.*, rhenium content and chromium content) are result effective, it can be *prima facie* obvious to optimize those parameters.

In contrast, *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977) (A copy was enclosed with Applicant’s Prior Response), the claimed invention concerned a wastewater treatment device with a ratio of tank volume to contactor area of 0.12 gal./sq. ft., the optimum value in that it maximizes “treatment capacity” so that the effectiveness of a given contactor is maximized. The Examiner had rejected the claim as obvious in view of the El-Naggar reference, which disclosed the basic device in question, but failed to teach a ratio of tank volume to contactor area. *Id.* at 619. The Court reversed the rejection, holding that “[i]t is impossible to recognize, from . . . El-Naggar, that ‘treatment capacity’ is a function of ‘tank volume’ or the tank volume-to-contactor area ratio. Recognition of this functionality is essential to the obviousness of conducting experiments to determine the value of the ‘tank volume’ ratio which will maximize treatment capacity.” *Id.* at 620 (emphasis added). Therefore, when the prior art fails to recognize a that parameter (*e.g.*, tank volume to contractor ratio) is result effective, it is nonobvious to optimize those parameters.

With respect to the pending claims, the Office Action failed to establish that any of the cited references – much less the skilled artisan – recognized that gallic acid content within tannic acid could achieve a recognized result. As such, while it may be arguably within the ordinary skill in the art to optimize a tannic acid concentration in view of the cited references, there is simply no disclosure in any of the cited references that evidences a recognition of any relationship whatsoever between gallic acid content and effectiveness of stain resistance. Moreover, the Action ignores its burden to set forth a legally sufficient *prima facie* rejection by making a bald assertion of obviousness and improperly shifting the burden upon the Applicant to show the sub-range of gallic acid content is unrecognized. May, 17, 2007 Office Action at ¶1, ¶2, and ¶3 (“It would have been obvious . . . absent a showing to the contrary, to optimize . . .”).

B. An obviousness rejection cannot be maintained where the claimed invention achieves unexpectedly good results.

It is well-established that, even if a *prima facie* case is established, “the presumption will be rebutted if it can be shown . . . that there are new and unexpected results relative to the prior art.” *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317, 1322 (Fed. Cir. 2004). While Applicant asserts that the pending claims are not *prima facie* obvious, Applicant’s Response of February 26, 2007, enclosed the declaration of Dennis J. Jones, Jr. under 37 C.F.R. § 1.132, which demonstrated that compositions comprising tannic acid having the recited sub-range of gallic acid content provide fiber, yarn, or carpet having unexpected and substantially superior stain resistance.

The Jones declaration established that treatment compositions having the recited sub-range of gallic acid content produce fibers significantly more resistant to “browning” – indicating superior stain resistance. Moreover, the Jones declaration established criticality of the claimed sub-range by comparing stain resistance when using tannic acids having gallic acid contents within the claimed range (*e.g.*, 0.96%) to tannic acids having gallic acid contents outside the claimed range (*e.g.*, 5.26% and 12.05%). *See* Jones declaration at ¶¶16-24. Because the cited references (in particular, the De Lathauwer reference) completely fail to address gallic acid content, Applicant compared the superior results obtained from the claimed gallic acid content ranges to the gallic acid contents in a variety of commercially available tannic acids (*e.g.*, “any commercial tannic acid can be used.”). Close inspection of the specification’s examples reveals that procedures analogous, if not identical, to those used in the De Lathauwer reference were employed. Direct comparison of the claimed subject matter (*e.g.*, 0.96%) to the closest examples outside the claimed range reveals substantially superior results.

Because the cited references completely failed to address gallic acid content, the substantially superior results due to the claimed gallic acid content that were demonstrated in the Jones declaration were unexpected to those of skill in the art at the time the invention was made.

II. Two-part Treatment claims 70 and 73-79 and Fiber claim 80

The Jones declaration also demonstrated that unexpectedly superior stain resistance was achieved when applying a two-part aqueous treatment comprising a first aqueous treating

composition comprising tannic acid and a separate second topical treating composition comprising a fluorochemical. *See* Jones declaration at ¶¶25-30.

The claimed two-part treatment produced fibers significantly more resistant to “browning” as well as having improved stain resistance in general, as summarized in the Table (and represented graphically in Graphs I-IV). *See* Jones declaration at pp. 9-12. In each graph, when the inventive examples (*i.e.*, a separate, topically applied fluorochemical was used) were substantially superior to the comparative examples (*e.g.*, De Lathauwer), irrespective of which commercially available tannic acid was employed. That is, the inventive examples (“K” in Graphs I-II and “L” in Graphs III-IV) exhibit significantly lower “browning” (Graphs I-II) and total stain (Graphs III-IV) than the comparative examples (“A” in Graphs I-II and “E” in Graphs III-IV). Conditions and results for each example used were listed in the Table. Again, close inspection of the specification’s examples reveals that procedures analogous, if not identical, to those used in the De Lathauwer reference were employed.

Neither the combination of tannic acid and a separate, topical fluorochemical treatment nor improved stain resistance resulting therefrom is disclosed or suggested anywhere in the cited references. Thus, Applicant asserts that the substantially superior results of the claimed combination demonstrated in the Jones declaration were unexpected to those of skill in the art at the time the invention was made.

Respectfully submitted,
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CERTIFICATE OF EFS-WEB TRANSMISSION UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence – including any items indicated as attached, enclosed, or included – is being transmitted by EFS-WEB on the date indicated below.

/D. Brian Shortell/

August 20, 2007

D. Brian Shortell, JD, PhD

Date